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## 1993 UPDATE, CHECKLIST OF THE VASCULAR PLANTS OF BRYCE CANYON NATIONAL PARK, UTAH

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**ABSTRACT.**—An updated checklist of the vascular flora of Bryce Canyon National Park is presented, including 455 species arranged in 232 genera and 73 families. Four species have been added to the park list based on 1991 fieldwork: *Arabis perennans*, *Arceuthobium divaricatum*, *Gentiana parryi*, and *Haplopappus acaulis*. Recent changes in nomenclature have been included, and several species identifications have been corrected. The six largest families are, in decreasing size, Asteraceae, Poaceae, Fabaceae, Brassicaceae, Serophulariaceae, and Rosaceae. Common names and an index are provided.

**Key words:** Bryce Canyon National Park, flora, vascular plants.

Recent fieldwork in Bryce Canyon National Park, along with nomenclatural changes in the Utah flora, has necessitated an updated version of the flora of Bryce Canyon National Park, south central Utah. The last published version of this species list is now 12 years old (Buchanan and Graybosch 1981). We offer this revised list hoping it will be useful to researchers currently engaged in vegetation and floristic work in and around the park.

Nomenclature in general follows the Intermountain Flora (Cronquist et al. 1972–1990), except for the substitution of the more recent treatment of the Poaceae in Arnow (1987). For those families not yet treated, Welsh et al. (1987) is used. We differ from the above volumes in the delimitation of some families. In particular, we cannot accept the outmoded use of the Polypodiaceae as a “catch-all” group

for the ferns, as fern phylogeny has become increasingly stable over the last few years, and well-established classifications currently exist. We follow Weber (1987), who has provided an analysis of the new classification for regional ferns. Only two genera occur at Bryce Canyon, *Cheilanthes*, in the Sinopteridaceae, and *Pteridium*, in the Hypolepidaceae. We also follow the now well-established classification for the Liliaceae and its allies, which has become generally accepted worldwide (Dahlgren et al. 1985). Hence, in addition to the Liliaceae, we have members of the Agavaceae, Alliaceae, Asparagaceae, Calochortaceae, Convallariaceae, and Melanthiaceae in the park flora. Although we feel that the alternative classifications of Weber (1987) have much to offer, we think it premature to utilize his system in its entirety, as this would

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necessitate numerous nomenclatural innovations for Utah taxa. Hence, only three genera are accepted that differ from the treatments in A Utah Flora and Intermountain Flora: *Bistorta* (*Polygonum* in part), *Iponopsis* (*Gilia* in part), and *Pseudocymopterus* (*Cymopterus* in part). We utilize these because they have been widely accepted in North American floristic work. Finally, we note that there are fundamental differences in nomenclature at the species level for some plants at Bryce Canyon when Welsh et al. (1987) and Weber (1987) are compared; e.g., in *Arabis*, *Euphorbia*, *Solidago*, and *Stephanomeria* among others. We hope that future revisionary work on these taxa will resolve these nomenclatural differences.

We have incorporated the additions to the park flora made by Hallsten and Roberts (1988). Also, four species have been added to the 1981 list based on recent fieldwork and corrections of herbarium material: *Arabis peregrina*, *Arcenthobium divaricatum*, *Gentiana parryi*, and *Haplopappus acaulis* (Spence 1992). Several species have either been dropped from the list or replaced by other species, based on misidentifications or changes in our understanding of the taxonomy and distributions of certain taxa in Utah. These are listed in Table 1. The Atlas of the Vascular Plants of Utah (Albee et al. 1988) was consulted for range information. If a species on the 1981 list was not represented in the park herbarium, and was well outside its normal range in Utah based on the atlas, it was excluded. The checklist that follows is orga-

nized alphabetically by family, genus, and species.

Table 2 includes a list of species that have been found around the boundaries of Bryce Canyon National Park but are not yet known from within the park. Future fieldwork is likely to find some of these species in the park.

#### CHECKLIST OF THE VASCULAR PLANTS OF BRYCE CANYON NATIONAL PARK

	ACERACEAE
1. <i>Acer glabrum</i> Torr.	Rocky Mountain maple
2. <i>A. grandidentatum</i> Nutt.	bigtooth maple
	AGAVACEAE
3. <i>Yucca angustissima</i> Trel.	narrowleaf yucca
4. <i>Y. harrimaniae</i> Trel.	Harriman yucca
	ALIACEAE
5. <i>Allium acuminatum</i> Hook.	tapertip onion
6. <i>A. nevadense</i> S. Wats.	Nevada onion
	AMARANTHACEAE
7. <i>Amaranthus blitoides</i> Wats.	prostrate pigweed
	ANACARDIACEAE
8. <i>Rhus trilobata</i> Nutt.	squawbush
	APIACEAE
9. <i>Berula erecta</i> (Huds.) Cov.	cutleaf waterparsnip
10. <i>Cicuta maculata</i> L.	water hemlock
11. <i>Cynopterus purpureus</i> Wats.	purple springparsley
12. <i>Ligusticum porteri</i> Coulter & Rose	southern ligusticum
13. <i>Lomatium nudum</i> (Math.) Math.	least biscuitroot

TABLE 1. Changes in species identifications in, and deletions from, the 1981 list of the flora of Bryce Canyon National Park. 1 = outside range, misidentification, deleted from list; 2 = inside range, misidentification, retained in list.

#### Taxa previously reported

- Arenaria nuttallii* Pax
- Campanula rotundifolia* L.
- Franseria implexa* Greene
- Gentianella tenella* Rottb.
- Lomatium nuttallii* Gray Macbr.
- Phlox condensata* Gray T. Nels.
- P. diffusa* Benth.
- P. tenuifolia* Wherry
- Physotropis lutea* Gray
- Polemonium viscosum* Nutt.
- Scirpus americanus* Pers.
- Senecio cylindraceus* Benth.
- Solidago occidentalis* Nutt. & G.
- Tanacetum nuttallii* A. Nels.
- Theclaypodium sagittatum* (Nutt.) Benth.

#### Current justification and status

- (1) no specimen, outside range
- (2) *C. parryi* Gray
- (2) *E. compositus* Pursh
- (2) *G. tortuosa* (Jones) J. Gillett
- (2) *L. parryi* (Wats.) Macbr.
- (2) *P. pulvinata* (Wherry) Cronq.
- (2) *P. hoodii* Richards
- (2) *P. pulvinata* (Wherry) Cronq.
- (1) no specimen, outside range
- (1) no specimen, outside range
- (2) *S. pungens* Vahl
- (2) *S. hartmanii* Heller
- (2) *S. sparsiflora* Gray
- (2) *Sphaeromeria capitata* Nutt.
- (1) no specimen, outside range

TABLE 2. List of species reported from near the boundary of Bryce Canyon National Park, but not yet collected from within the park.

ASCLEPIADACEAE <i>Asclepias cryptoceras</i> Wats.	JUNCACEAE <i>Juncus mertensianus</i> Bong.
ASTERACEAE <i>Artemisia filifolia</i> Torr. <i>Cirsium clavatum</i> (Jones) Petrak <i>C. wheeleri</i> (Gray) Petrak <i>Crepis atrabarba</i> Heller <i>Erigeron aphanaestis</i> (Gray) Greene <i>E. longophyllum</i> Hook. <i>Haplopappus lanceolatus</i> Hook. <i>H. parryi</i> Gray <i>Hymenoxys depressa</i> (T. & G.) Welsh & Reveal <i>Senecio canus</i> Hook. <i>Solidago nana</i> Nutt. <i>Stephanomeria exigua</i> Nutt.	LAMIACEAE <i>Mentha arvensis</i> L.
BRASSICACEAE <i>Arabis drummondii</i> Gray <i>Lepidium lasiocarpum</i> Nutt. <i>Lesquerella wardii</i> Wats. <i>Thlaspi montanum</i> L.	LINACEAE <i>Linum austrole</i> Heller
CAPRIFOLIACEAE <i>Ambucus racemosus</i> L.	ORCHIDACEAE <i>Habenaria hyperborea</i> (L.) R.Br.
CYPERACEAE <i>Carex egglestonii</i> Mack. <i>C. petasata</i> Dewey <i>C. simulata</i> Mack.	PINACEAE <i>Abies lasiocarpa</i> (Hook.) Nutt. <i>Picea engelmannii</i> Engelm.
EPHEDRACEAE <i>Ephedra viridis</i>	POACEAE <i>Lolium perenne</i> L.
FABACEAE <i>Astragalus lentiginosus</i> Hook. <i>A. wardii</i> Gray <i>Trifolium kingii</i> Wats.	POLEMONIACEAE <i>Leptodactylon caespitosum</i> Nutt.
GROSSULARIACEAE <i>Ribes montigenum</i> McClint.	POLYGONACEAE <i>Eriogonum arctioides</i> Barneby
HYPERICACEAE <i>Hypericum formosum</i> H.B.K.	RANUNCULACEAE <i>Caltha leptosepala</i> DC.
IRIDACEAE <i>Sisyrinchium idahoense</i> Bickn.	ROSACEAE <i>Amelanchier alnifolia</i> Nutt. <i>Iresia kingii</i> Wats.
14. <i>L. parryi</i> (Wats.) Macbr. 15. <i>Pseudocymopterus montanus</i> (Gray) Coulter & Rose	SALICACEAE <i>Salix boothii</i> Dorn
16. <i>Apocynum androsaemifolium</i> L.	SCROPHULARIACEAE <i>Cordylanthus wrightii</i> Gray <i>Pedicularis groenlandica</i> Retz. <i>Penstemon laevis</i> Peimell <i>P. procerus</i> Graham
17. <i>Asclepias asperula</i> (Dene.) Woodson	SOLANACEAE <i>Datura stramonium</i> L. <i>Nicotiana attenuata</i> Wats.
18. <i>A. speciosa</i> Torr.	SPARGANIACEAE <i>Sparganium eurycarpum</i> Engelm.
19. <i>Asparagus officinalis</i> L.	VIOLACEAE <i>Viola nephrophylla</i> Greene
20. <i>Achillea lanulosa</i> Nutt.	ASPARAGACEAE
21. <i>Agoseris aurantiaca</i> (Hook.) Greene	ASTRACEAE

- showy or common  
milkweed
- asparagus
- yarrow
- orange agoseris

- var. *aurita* Gray  
var. *purpurea* Gray Greene  
22. *Agoseris glauca* (Pursh)  
D. Dietr.  
var. *pariflora* (Nutt.) Rydb.  
23. *Ancistrocaria dimorpha* (Nutt.)  
T & G.  
24. *A. microphylla* Rydb.  
25. *A. parvifolia* Nutt.  
26. *A. rosulata* Rydb.  
27. *Arnica chamissonis* Less.  
28. *A. cordifolia* Hook.  
29. *Artemisia campestris* L.  
30. *A. Carruthii* Wood ex Carruth  
31. *A. dracunculus* L.  
32. *A. frigida* Willd.  
33. *A. ludoviciana* Nutt.  
34. *A. nova* A. Nels.  
35. *A. pygmaea* Gray  
36. *A. tridentata* Nutt.  
37. *Aster chilensis* Nees  
38. *A. eatonii* (Gray) Howell  
39. *A. glaucodes* Blake  
40. *A. occidentalis* (Nutt.) Torr.  
& Gray  
41. *Balsamorhiza sagittata* (Pursh)  
Nutt.  
42. *Brickellia oblongifolia* Nutt.  
43. *Centaurea repens* L.  
44. *Chaenactis douglasii* (Hook.)  
H. & A.  
45. *Chrysanthemus depressus*  
Nutt.  
46. *C. linifolius* Greene  
47. *C. nauseosus* (Pallas) Britt.  
var. *glabratum* (Gray) Cronq.  
48. *C. parryi* (Gray) Greene  
49. *C. vaseyi* (Gray) Greene  
50. *C. viscidiflorus* (Hook.) Nutt.  
51. *Cirsium arizonicum* (Gray)  
Petrak  
var. *arizonicum*  
var. *nidulum* (Jones) Welsh  
52. *C. calcareum* (Jones) Woot.  
& Standl.  
var. *pulchellum* (Greene)  
Welsh  
53. *C. neomexicanum* Gray  
54. *C. undulatum* Nutt. Sprengel  
55. *C. vulgare* Savi Ten.  
56. *Comiza canadensis* L. Cronq.  
*Crepis intermedia* Gray  
57. *C. occidentalis* Nutt.  
58. *C. runcinata* (James) T. & G.  
var. *glauca* Nutt., Babcock  
& Stebbins  
60. *Erigeron abapus* Cronq.  
61. *E. canus* Gray  
62. *E. compositus* (L.) Gray  
63. *E. divergens* T. & G.
- mountain dandelion  
low pussytoes  
rosy pussytoes  
small-leaf pussytoes  
woolly pussytoes  
Chamiso arnica  
heartleaf arnica  
field sagewort  
Carruth sagewort  
tarragon  
fringed sagewort  
foothill sagebrush  
black sagebrush  
pigmy sagebrush  
big sagebrush  
Pacific aster  
Eaton aster  
blueleaf aster  
western aster  
arrowleaf balsamroot  
Mojave brickellbush  
Russian knapweed  
Douglas dustymaiden  
dwarf rabbitbrush  
spreading rabbitbrush  
rubber rabbitbrush  
Parry rabbitbrush  
Vasey rabbitbrush  
mountain rabbitbrush  
Arizona thistle  
New Mexico thistle  
wavyleaf thistle  
bull thistle  
Canada horseweed  
Gray hawksbeard  
western hawksbeard  
meadow hawksbeard  
Abajo fleabane  
hoary fleabane  
fernleaf fleabane  
spreading fleabane
64. *E. catonii* Gray  
65. *E. flagellaris* Gray  
66. *E. pumilus* Nutt.  
ssp. *concinnooides* Cronq.  
67. *E. speciosus* (Lindl.) DC.  
68. *E. ursinus* D.C. Eaton  
69. *E. vagus* Payson  
70. *Grindelia squarrosa* (Pursh)  
Dunal  
71. *Gutierrezia sarothrae*  
(Pursh) Britt. & Rusby  
72. *Haplopappus acaulis* (Nutt.)  
Gray  
73. *H. armerioides* (Nutt.) Gray  
74. *H. scopulorum* (Jones)  
Blake  
75. *H. zionis* L.C. Anderson  
76. *Helianthella uniflora*  
(Nutt.) T. & G.  
77. *Helianthus annuus* L.  
78. *Helianomeris multiflora* Nutt.  
79. *Heterotheca jonesii* (Blake)  
Welsh & Atwood  
80. *H. villosa* (Pursh) Shinn.  
81. *Hymenopappus filifolius* Hook.  
var. *cineraceus*  
var. *lugens* (Greene) Jeps.  
82. *Hymenoxys acaulis* (Pursh)  
Parker  
83. *H. richardsonii* (Hook.)  
Cockerall  
84. *Iva axillaris* Pursh  
85. *Lactuca serriola* L.  
86. *L. taraxica* (L.) C.A. May  
spp. *pulchella* (Pursh)  
Stebbins  
87. *Leuceline ericoides* (Torr.)  
Greene  
88. *Ligodesmia grandiflora*  
(Nutt.) T. & G.  
89. *Macrorhaphaea canescens*  
(Pursh) Gray  
90. *M. grindeliaoides* (Nutt.)  
Shinners  
91. *M. linearis* Greene  
92. *Petradoria pumila* (Nutt.)  
Greene  
93. *Senecio atratus* Greene  
94. *S. hartmannii* Heller  
95. *S. hydropithus* Nutt.  
96. *S. multilobatus* T. & G.  
97. *S. spartioides* T. & G.  
98. *Solidago spathulata* DC.  
99. *S. parryi* (Gray) Greene  
100. *S. sparsiflora* Gray  
101. *Sphaeromeria capitata*  
Nutt.
- Eaton fleabane  
trailing fleabane  
low fleabane  
Oregon fleabane  
bear fleabane  
wandering fleabane  
curlycup gumweed  
broom snakeweed  
stemless goldenweed  
thrifty goldenweed  
Rocky Mountain  
goldenweed  
Cedar Breaks  
goldenweed  
little sunflower  
common sunflower  
showy goldeneye  
Jones goldenaster  
hoary goldenaster  
hymenopappus  
stemless woollybase  
Colorado rubberplant  
poverty sumpweed  
prickly lettuce  
blue lettuce  
rose heath  
showy rushpink  
hoary tansyaster  
gumweed tansyaster  
tansy aster  
rock goldenrod  
black groundsel  
Hart groundsel  
water groundsel  
Uintah groundsel  
broom groundsel  
coast goldenrod  
Parry goldenrod  
few-flowered  
goldenrod  
sphaeromeria

102. <i>Stephanomeria spinosa</i> (Nutt.) Tombs.	thorn wirelettuce	135. <i>D. sophia</i> (L.) Webb	flixweed
103. <i>S. tenuifolia</i> (Torr.) Hall	slenderleaf wirelettuce	136. <i>Draba subalpina</i> Goodman & Hitchc.	breaks draba
104. <i>Taraxacum officinale</i> Weber		137. <i>Erysimum asperum</i> (Nutt.) DC.	western wallflower
105. <i>Tetradymia canescens</i> DC.	common dandelion	138. <i>E. inconspicuum</i> (S. Wats.) MacMill	small wallflower
106. <i>Toumendia exscapa</i> (Richards) Porter	Gray horsebrush	139. <i>Lepidium densiflorum</i> Schrad.	prairie pepperweed
107. <i>T. incana</i> Nutt.	stemless townsendia	140. <i>L. montanum</i> Nutt.	mountain pepperweed
108. <i>T. minima</i> Eastw.	hoary townsendia	141. <i>Lesquerella intermedia</i> (S. Wats.) Heller	Watson bladderpod
109. <i>Tragopogon dubius</i> Scop.	least townsendia	142. <i>L. kingii</i> S. Wats. var. <i>parvifolia</i> (Maguire & Holmgren) Welsh & Reveal	King bladderpod
110. <i>Verbesina encelioides</i> (Cav.) Benth. & Hook.	yellow salsify	143. <i>L. rubricaulis</i> Rollins	breaks bladderpod
	golden crownbeard	144. <i>Malcohorta africana</i> (L.) R. Br.	African mustard
		145. <i>Physaria chambersii</i> Rollins	Chamber twinpod
		146. <i>P. newberryi</i> Gray	Newberry twinpod
		147. <i>Schoenorambe linifolia</i> (Nutt.) Greene	schoenrambe
		148. <i>Stanleya pinnata</i> (Pursh) Britton	prince's plume
		149. <i>Streptanthus cordatus</i> Nutt.	twistflower
		150. <i>Thelypodium sagittatum</i> (Nutt.) Endl. var. <i>ovalifolium</i> (Rydb.) Welsh & Reveal	arrowleaf thelypody
		151. <i>Thlaspi arvense</i> L.	field pennycress
			CACTACEAE
		152. <i>Echinocactus</i> <i>triglochidiatus</i> Engelm.	claret cup
		153. <i>Opuntia crinacea</i> Engelm. & Bigel.	grizzlybear pricklypear
		154. <i>Pediocactus simpsonii</i> (Engelm.) Britt. & Rose	Simpson pediocactus
		155. <i>Sclerocactus whipplei</i> (Engelm. & Bigel.) Britt. & Rose	fishhook cactus
			CALOCHORTACEAE
		156. <i>Calochortus nuttallii</i> T. & G.	segolily
			CAMPANULACEAE
		157. <i>Campanula parryi</i> Gray	Parry bellflower
			CAPPARACEAE
		158. <i>Cleome lutea</i> Hook.	yellow beeplant
			CAPRIFOLIACEAE
		159. <i>Sambucus cerulea</i> Raf.	blue elderberry
		160. <i>Symporicarpus oreophilus</i> Gray	mountain snowberry
			CARYOPHYLLACEAE
		161. <i>Arenaria falcifolia</i> A. Gray	Fendler sandwort
		162. <i>Lychne drunmondii</i> Hook. & S. Wats.	Drummond catchfly

163. <i>Polygonum secundiflora</i> Nutt.		193. <i>C. stenophylla</i> Wahl.	narrowleaf sedge
164. <i>Silene petersonii</i> Maguire var. <i>minor</i> C. L. Hitchc. & Maguire	creeping nailwort Peterson campion	194. <i>Eleocharis palustris</i> (L.) R. & S.	common spikerush
165. <i>Stellaria jamesiana</i> Torr.	James chickweed	195. <i>E. pauciflorus</i> (Lightf.) Link	spikerush
166. <i>S. longipes</i> Goldie	longstalk chickweed	196. <i>E. rostellata</i> (Torr.) Torr.	beaked spikerush
		197. <i>Scirpus pungens</i> Pers.	common threesquare bulrush
CELASTRACEAE			
167. <i>Paxistima myrsinoides</i> (Pursh) Raf.	mountain lover		
CHENOPODIACEAE			
168. <i>Atriplex canescens</i> Pursh Nutt.	fourwing saltbush	198. <i>Shepherdia argentea</i> (Pursh) Nutt.	
169. <i>A. confertifolia</i> Torr. & Frem. Wats.	shadscale	199. <i>S. canadensis</i> (L.) Nutt.	silver buffaloberry
170. <i>A. gardneri</i> Moq. D. Dietr. var. <i>tridentata</i> (Kuntze) MacBr.	Gardner saltbush	200. <i>S. rotundifolia</i> Parry	russet buffaloberry
171. <i>Chenopodium atrovirens</i> Rydb.	mountain goosefoot		roundleaf buffaloberry
172. <i>C. fremontii</i> Wats. var. <i>incanum</i> Wats.	Fremont goosefoot	EQUISETACEAE	
173. <i>C. leptophyllum</i> Nutt.	narrowleaf goosefoot	201. <i>Equisetum arvense</i> L.	field horsetail
174. <i>Eurotia lanata</i> (Pursh) Moq.	winterfat	202. <i>E. laevigatum</i> A. Br.	smooth horsetail
175. <i>Salsola iberica</i> Sennen & Pau	Russian thistle		
176. <i>Sarcobatus vermiculatus</i> (Hook.) Torr.	greasewood	ERICACEAE	
		203. <i>Arctostaphylos patula</i> Greene	greenleaf manzanita
CONVALLARIACEAE			
177. <i>Smilacina stellata</i> (L.) Desf.	starry false Solomon seal	204. <i>A. uva-ursi</i> (L.) Spreng.	bearberry
CONVOLVULACEAE			
178. <i>Convolvulus arvensis</i> L.	field bindweed		
CORNACEAE			
179. <i>Cornus stolonifera</i> Michx.	red-osier dogwood	EUPHORBIACEAE	
		205. <i>Euphorbia brachycera</i> Engelm.	shorthorn spurge
CUPRESSACEAE			
180. <i>Juniperus communis</i> L.	common juniper	206. <i>E. fendleri</i> T. & G.	Fendler spurge
181. <i>J. osteosperma</i> (Torr.) Little	Utah juniper		
182. <i>J. scopulorum</i> Sarg.	Rocky Mountain juniper	FABACEAE	
		207. <i>Astragalus agrestis</i> G. Don	field milkvetch
CYPERACEAE			
183. <i>Carex athrostachya</i> Oakes	slenderbeak sedge	208. <i>A. amphioxys</i> Gray	crecent milkvetch
184. <i>C. aurea</i> Nutt.	golden sedge	209. <i>A. argophyllum</i> T. & G.	silverleaf milkvetch
185. <i>C. canescens</i> L.	pale sedge	210. <i>A. bisulcatus</i> (Hook.) Gray	two-grooved milkvetch
186. <i>C. douglasii</i> Boott	Douglas sedge	211. <i>A. calycosus</i> Wats.	Torrey milkvetch
187. <i>C. microstachys</i> Michx.	smallwing sedge	212. <i>A. convallarius</i> Greene	timber milkvetch
188. <i>C. nebrascensis</i> Dewey	Nebraska sedge	213. <i>A. hallii</i> Gray	Hall milkvetch
189. <i>C. oederi</i> L.	green sedge	214. <i>A. humistratus</i> Gray	groundcover milkvetch
190. <i>C. praeangustata</i> (Wats.) Benth.	blackcreep sedge	215. <i>A. kentrophyta</i> Gray	kentrophyta
191. <i>C. rossii</i> F. Boott	Ross sedge	216. <i>A. longicarpus</i> Torr.	great rushy milkvetch
192. <i>C. rostrata</i> Stokes	bedded sedge	217. <i>A. megacarpus</i> (Nutt.) Gray	great bladdery milkvetch
		218. <i>A. miser</i> Hook.	weedy milkvetch
		219. <i>A. tenellus</i> Pursh	pulse milkvetch
		220. <i>Hedysarum boreale</i> Nutt.	
		221. <i>Lathyrus brachycalyx</i> Rydb.	northern sweetvetch
		222. <i>Lotus utahensis</i> Ottley	purple peavine
		223. <i>Lupinus argenteus</i> Pursh var. <i>argenteus</i>	Utah trefoil
		var. <i>rubricaulis</i> (Greene)	silvery lupine
		Welsh	
		224. <i>L. kingii</i> S. Wats.	King lupine
		225. <i>L. sericeus</i> Pursh	silky lupine
		226. <i>Medicago lupulina</i> L.	black medic
		227. <i>M. sativa</i> L.	alfalfa

228. <i>Melilotus officinalis</i> (L.) Pall.	yellow sweetclover	LAMIACEAE
229. <i>Oxytropis deflexa</i> (Pall.) DC.	hangpod locoweed	American dragonhead
var. <i>sericea</i> T. & G.		
230. <i>O. oreophila</i> Gray	mountain locoweed	mock penny royal
231. <i>Pedionichum parviflorum</i> (Welsh & Atwood)		hoarhound
J. Grimes		
232. <i>Trifolium repens</i> L.	Paria breadroot	cloverhead horsemint
233. <i>Vicia americana</i> Willd.	white clover	selfheal
	American vetch	
FAGACEAE		
234. <i>Quercus gambelii</i> Nutt.	Gambel oak	
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235. <i>Corydalis aurea</i> Willd.	golden corydalis	
GENTIANACEAE		
236. <i>Frasera speciosa</i> Griseb.	elkweed	
237. <i>Gentiana affinis</i> Griseb.	Rocky Mountain gentian	
238. <i>G. parryi</i> Engelm.	Parry gentian	
239. <i>Gentianella heterosepala</i> (Engelm.) Holub	Engelmann gentian	
240. <i>G. tortuosa</i> (Jones) J. Gillett	Jones gentian	
241. <i>Gentianopsis detonsa</i> (Rottb.) Ma	fringed gentian	
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242. <i>Ceranium caespitosum</i> James	small-leaf geranium	
243. <i>G. richardsonii</i> Fisch. & Trautv.	Richardson geranium	
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244. <i>Ribes aureum</i> Pursh	golden currant	
245. <i>Ribes cereum</i> Dougl.	wax or squaw currant	
HYPROLEPIDACEAE		
246. <i>Pteridium aquilinum</i> (L.) Kuhn	bracken fern	
IRIDACEAE		
247. <i>Iris missouriensis</i> Nutt.	Missouri iris	
248. <i>Sisyrinchium demissum</i> Greene	blue-eyed grass	
JUNCACEAE		
249. <i>Juncus arcticus</i> Willd.	wiregrass	
250. <i>J. bufonius</i> L.	toad rush	
251. <i>J. ensifolius</i> Wikstr.	swordleaf rush	
252. <i>J. longistylis</i> Torr.	longstyle rush	
253. <i>J. torreyi</i> Coville	Torrey rush	
JUNCAGINACEAE		
254. <i>Triglochin maritima</i> L.	maritime arrowgrass	
255. <i>T. palustris</i> L.	marsh arrowgrass	

256. <i>Draegeria parviflorum</i> Nutt.	LAMIACEAE
257. <i>Hedonea drummondii</i> Benth.	American dragonhead
258. <i>Marrubium vulgare</i> L.	mock penny royal
259. <i>Monardella odoratissima</i> Benth.	hoarhound
260. <i>Pruella vulgaris</i> L.	cloverhead horsemint
	selfheal
LILIACEAE	
261. <i>Fritillaria atropurpurea</i> Nutt.	leopard lily
262. <i>Leucoocrinum montanum</i> Nutt. ex Gray	star lily
LINACEAE	
263. <i>Linum aristatum</i> Engelm.	broom flax
264. <i>L. kingii</i> Wats.	King flax
265. <i>L. lewisii</i> Pursh	blue flax
LOASACEAE	
266. <i>Mentzelia multiflora</i> (Nutt.) Gray	desert blazing star
MALVACEAE	
267. <i>Sphaeralcea coccinea</i> (Pursh) Rydb.	scarlet globemallow
268. <i>S. parvifolia</i> A. Nels.	small-flowered globemallow
MELANTHIAEAE	
269. <i>Zigadenus elegans</i> Pursh	mountain death camas
NYCTAGINACEAE	
270. <i>Abronia fragrans</i> Hook.	fragrant sand verbena
271. <i>A. nana</i> Wats.	low sand verbena
ONAGRACEAE	
272. <i>Calylophus laevigatus</i> (T. & G.) Raven	lavender evening primrose
273. <i>Epilobium angustifolium</i> L.	fireweed
274. <i>E. ciliatum</i> Raf.	northern willowherb
275. <i>Gayophytum ramosissimum</i> T. & G.	branchy groundsmoke
276. <i>G. racemosum</i> T. & G.	kitchenweed
277. <i>Oenothera caespitosa</i> Nutt.	tilted evening primrose
278. <i>O. coronopifolia</i> T. & G.	rootstalk evening primrose
279. <i>O. flava</i> (A. Nels.) Garrett	yellow evening primrose
280. <i>O. howardii</i> (A. Nels.) W.L. Wagner	bronze evening primrose
281. <i>O. longissima</i> Rydb.	Bridges evening primrose

282. *O. pallida* Lindl.

## ORCHIDACEAE

283. *Corallorrhiza maculata* Raf.  
 284. *C. striata* Lindl.  
 285. *Epipactis gigantea* Dougl.  
 ex Hook.  
 286. *Habenaria dilatata*  
 (Pursh) Hook.  
 287. *H. sparsiflora* S. Wats.

## OROBANCHACEAE

288. *Orobanche fasciculata*  
 Nutt.

clustered broomrape

## PINACEAE

289. *Abies concolor* (Gord. &  
 Glend.) Lindl.  
 290. *Picea pungens* Engelm.  
 291. *Pinus edulis* Engelm.  
 292. *P. flexilis* James  
 293. *P. longaeva* D. K. Bailey  
 294. *P. ponderosa* Laws.  
 295. *Pseudotsuga menziesii*  
 (Mirb.) Franco

## PLANTAGINACEAE

296. *Plantago eriopoda* Torr.  
 297. *P. lanceolata* L.

woolly-foot plaintain  
English plaintain

## POACEAE

298. *Agropyron cristatum*  
 (L.) Gaertn.  
 299. *Agrostis stolonifera* L.  
 300. *Aristida purpurea* Nutt.  
 301. *Bouteloua gracilis*  
 H.B.K. Lag. ex Steudel  
 302. *Bromus anomalus* Rupr.  
 ex Fourn.  
 303. *B. curinatus* H. & A.  
 304. *B. ciliatus* L.  
 305. *B. incrimis* Leysser  
 306. *B. japonicus* Thunb.  
 ex Murray  
 307. *B. tectorum* L.  
 308. *Calanagrostis scopulorum*  
 M E. Jones

crested wheatgrass  
carpet bentgrass  
purple threeawn  
blue grama  
nodding brome  
mountain brome  
fringed brome  
smooth brome  
meadow brome  
cheatgrass

Jones reedgrass  
slimstem reedgrass  
orchard grass  
tufted hairgrass  
Canada wildrye  
squirrel tail  
blue wildrye  
Russian wildrye  
spike wheatgrass  
Salina wildrye  
spring wheatgrass

pale evening primrose	319. <i>E. smithii</i> (Rydb.) Gould 320. <i>E. spicatus</i> (Pursh) Gould	western wheatgrass bluebunch wheatgrass
spotted coralroot	321. <i>E. trachycaulis</i> (Link) Gould ex Shinners	slender wheatgrass
striped coralroot	322. <i>Festuca octoflora</i> Walter	six weeks fesene
giant helleborine	323. <i>F. orina</i> L.	sheep fesene
white bog orchid	324. <i>F. pratensis</i> Hudson	meadow fesene
Watson bog orchid	325. <i>Glyceria striata</i> (Lam.) A.S. Hitchc.	fowl managrass galleta
	326. <i>Hilaria jamesii</i> (Torr.) Benth.	meadow barley foxtail barley
	327. <i>Hordeum brachyantherum</i> Nevski	Junegrass
	328. <i>H. jubatum</i> L.	foxtail muhly
	329. <i>Koeleria macrantha</i> (Ledeb.) Schultes	scratchgrass
	330. <i>Muhlenbergia andina</i> (Nutt.) A.S. Hitchc.	mountain muhly sandhill muhly mat muhly
	331. <i>M. asperifolia</i> (Nees & Meyer) L.R. Parodi	littleseed ricegrass timothy
	332. <i>M. montana</i> (Nutt.) A.S. Hitchc.	Canada bluegrass
	333. <i>M. pungens</i> Thurber	muttongrass
	334. <i>M. richardsonis</i> (Trin.) Rydb.	Kentucky bluegrass
	335. <i>Oryzopsis micrantha</i> (Trin.) & Rupr.) Thurber	nodding bluegrass
	336. <i>Phleum pratense</i> L.	Sandberg bluegrass
	337. <i>Poa compressa</i> L.	Nuttall alkaligrass
	338. <i>P. fendleriana</i> (Steudel) Vasey	little bluestem
	339. <i>P. pratensis</i> L.	alkali sacaton
	340. <i>P. reflexa</i> Vasey & Scribn.	sand dropseed
	341. <i>P. secunda</i> Presl.	needle-and-thread
	342. <i>Puccinellia nuttalliana</i> (Schultes) A.S. Hitchc.	Indian ricegrass
	343. <i>Schizachyrium scoparium</i> (Michx.) Nash	Letterman needlegrass
	344. <i>Sporobolus airoides</i> (Torr.) Torr.	Nelson needlegrass
	345. <i>S. cryptandrus</i> (Torr.) Gray	pinewoods needlegrass
	346. <i>S. comata</i> Trin. & Rupr.	
	347. <i>S. hymenoides</i> R. & S.	
	348. <i>S. lettermanii</i> Vasey	
	349. <i>S. nelsonii</i> Scribn.	
	350. <i>S. pinetorum</i> Jones	
		POLEMONIACEAE
	351. <i>Ipomopsis aggregata</i> (Pursh) V. Grant	scarlet gilia, skyrocket
	352. <i>I. congesta</i> (Hook.) V. Grant	ballhead gilia
	353. <i>Leptodactylon pungens</i> (Torr.) Nutt.	prickly phlox
	354. <i>Linanthes strum nuttallii</i> (Gray) Ewan	Nuttall flaxflower
	355. <i>Phlox austromontana</i> Cov.	desert phlox
	356. <i>P. hoodii</i> Richards.	carpet phlox
	357. <i>P. longifolia</i> Nutt.	longleaf phlox
	358. <i>P. muscoides</i> Nutt.	moss phlox

359. <i>P. pulvinata</i> (Wherry) Cronq.	cushion phlox	ROSACEAE
360. <i>Polemonium caeruleum</i> L.	western Jacobs ladder	
		Utah serviceberry
		curlleaf mountain mahogany
		alder leaf mountain mahogany
		Apache plum
		mountain strawberry
		bush ocean spray
		Sevier ivesia
		squaw-apple
		silverweed
		cinquefoil
		pretty cinquefoil
		bearded cinquefoil
		shrubby cinquefoil
		slender cinquefoil
		cinquefoil
		chokecherry
		cliffrose
		bitterbrush
		Nutka rose
		Woods rose
		raspberry
		RUBIACEAE
		small bedstraw
		kelloggia
		SALICACEAE
		narrowleaf
		cottonwood
		Fremont
		cottonwood
		quaking aspen
		Bebb willow
		Drummond willow
		narrowleaf willow
		Geyer willow
		whiplash willow
		SANTALACEAE
		bastard toadflax
		SAXIFRAGACEAE
		slender woodland star
390. <i>Ceanothus fendleri</i> Gray	Fendler mountain lilac	
391. <i>C. martinii</i> M.E. Jones	Utah mountain lilac	

424 *Parnassia palustris* L.

## SCROPHULARIACEAE

425 *Castilleja chromosa* A. Nels.426 *C. linearifolia* Benth.427 *C. revealii* N. Holmgren428. *Cordylanthus kingii*

S. Wats.

429. *C. parviflorus* Ferriss

Wiggins

430. *Mimulus guttatus* DC.431. *M. rubellus* Gray432. *Orthocarpus luteus* Nutt.433. *O. purpureo-albus* Gray434. *Pedicularis centranthera*

Gray

435. *Pestemon bracteatus*

Keck

436. *P. caespitosus* Nutt. ex

Gray

437. *P. comarrhenus* Gray438. *P. catonii* Gray439. *P. leiocephalus* Pennell440. *P. rostriflorus* Kellogg441. *P. rydbergii* A. Nels.442. *P. strictus* Benth.443. *P. utahensis* Eastw.444. *Verbascum thapsus* L.445. *Veronica americana* Schw.

## SINOPTERIDACEAE

446. *Cheilanthes feei* Moore

## SOLANACEAE

447. *Solanum triflorum* Nutt.

## TAMARICACEAE

448. *Tamarix ramosissima*

Ledeb.

## VALERIANACEAE

449. *Valeriana acutiloba* Rydb.450. *V. edulis* Nutt.

## VERBENACEAE

451. *Verbena bracteata* Larg.

&amp; Rodr.

## VIOLACEAE

452. *Viola adunca* J. F. Smith453. *V. purpurea* Kellogg

## VISCACEAE

454. *Arcytopodium cyanocarpum*

Coulter &amp; Rose

northern grass-

of-Parmassus

desert paintbrush

Wyoming paintbrush

Bryce Canyon

paintbrush

King birdsbeak

smallflower birdsbeak

common monkeyflower

monkeyflower

yellow owlclover

purple-white

owlclover

dwarf loosewort

Platy penstemon

mat penstemon

dusty penstemon

firecracker penstemon

Markagunt penstemon

beaked penstemon

Rydberg penstemon

Rocky Mountain

penstemon

Utah penstemon

flannel millein

American brooklime

slender lipfern

cutleaf nightshade

salt cedar, tamarisk

cordilleran valerian

taprooted valerian

prostrate vervain

blue violet

pine violet

lumber pine dwarf

mistletoe

455. *A. divaricatum* Engelm.456. *A. douglasii* Engelm.457. *A. vaginatum* (Willd.) Presl.458. *Phoradendron juniperinum*

Gray

pinyon pine

dwarf mistletoe

Douglas dwarf

mistletoe

southwestern

dwarf mistletoe

juniper mistletoe

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